

The genus *Pavonia* Cav. (Malvaceae: Malvales) in Australia

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Abstract

Fryxell, Paul A. The genus *Pavonia* Cav. (Malvaceae: Malvales) in Australia. Nuytsia 6(3): 305-308 (1988). *Pavonia* is a large and diverse tropical genus but is poorly represented in Australia. *P. hastata* was probably an early introduction from South America. *Pavonia burchellii* is reported for the first time from Australia, being previously known from Africa, Asia, and Malesia, and an account of its complex synonymy is presented. A key to distinguish *P. hastata* and *P. burchellii* is given. The occurrence of the African *P. praemorsa* in garden cultivation in Australia is incidentally noted.

Introduction

Pavonia is one of the larger genera of the family Malvaceae. It includes over 100 species in South America (Kearney, 1958), about 50 species in North America (Kearney 1954, Fryxell 1979), and about 50 species in Africa (Ulbrich 1921). In addition there are a few species in southern Asia and in Malesia. The genus is poorly represented in Australia, and previous reports refer only to the occurrence of *P. hastata* Cav. in southeastern Australia. The present paper reports an additional species of *Pavonia* indigenous to the Kimberley region and a species cultivated as an ornamental shrub, and provides ancillary information about all three species known to occur in Australia.

Pavonia hastata Cav.

Pavonia hastata is a representative of sect. *Lebretonia* (cf. Krapovickas & Cristóbal 1962, Krapovickas 1977) and is perhaps the best known and most widely distributed representative of it. This section has its principal distribution and diversification (over 50 spp.) in South America. Although *Pavonia hastata* is primarily South American (Argentina, Uruguay, Paraguay, Bolivia, and Brazil), it also occurs disjunctly in Mexico (rarely), the southern United States (rarely), and in eastern Australia (commonly) and is generally considered introduced in these areas. It is sometimes grown as an ornamental.

In the Australian National Herbarium (CANB) among many collections of *P. hastata* there is a specimen collected by Robert Brown in 1802-1805, a scant 17 years after the settlement of Australia, a specimen that incidentally bears an unpublished binomial in Brown's hand. The citation is as follows:

NEW SOUTH WALES: Paterson's, Nepean and Hawkesbury rivers, near Sydney (Port Jackson), 1802-1805, *Robert Brown* s.n. (CANB).

In view of the existence of this specimen, it seems unlikely that *P. hastata* is a naturalized former cultigen. However, the possibility remains open (indeed likely) that it was introduced in ships ballast, or by some similar accidental means, very soon after settlement.

***Pavonia burchellii* (DC.) Dyer**

A recent opportunity for botanical exploration in the Kimberley region of northwestern Australia resulted in the unexpected discovery of a *Pavonia* from one of the northernmost sites in this area, near the tip of the Bougainville Peninsula. Subsequent study reveals that it is the same species as that treated and illustrated by Borssum Waalkes (1966) as *Pavonia procumbens* (Wight & Arnott) Walpers. It thus bridges the gap across the Timor Sea from Malesia to Australia and constitutes a plausible range extension for the species, as well as a new record for Australia. The new record is as follows:

WESTERN AUSTRALIA: beach near NE end of Bougainville Peninsula [14°01'S, 126°00'E]; among basaltic boulders above high tide; spreading shrubs 0.5-1 m tall; flowers yellow-orange. the genitalia declined; common in shade. 14 June 1985, *Fryxell, Craven & Stewart* 4796 (BM, CANB, CTES, DNA, MO, PERTH, US, pf).

Pavonia burchellii and *P. hastata* may be distinguished by means of the following key:

- A. Leaves narrowly hastate, 2.5-5 times as long as wide, stellate-puberulent or scabridulous (the hairs <0.1 mm); corolla pink or lavender with darker center; pedicels subequal to subtending leaves *P. hastata*
- A. Leaves broadly cordate-ovate, about as wide as long, often shallowly 3-lobed or 3-angled, stellate-pubescent (the hairs c. 0.5 mm); corolla yellow-orange; pedicels shorter than subtending leaves..... *P. burchellii*

Additional study reveals that this species presents a rather complex and extensive synonymy and that a name other than that used by Borssum Waalkes is the correct name. Since this synonymy does not seem to have been presented previously in full, and since the species in question has an extended distribution around the Indian Ocean from southern Africa to Malesia and (now) Australia, and since it is known by different names in various floras (see Table 1), it seems desirable to record the details of the synonymy. The species is quite variable over this range, which accounts for the rich synonymy, but seems best to be interpreted as a single variable species.

Pavonia burchellii (DC.) Dyer, Kew Bull. 1932: 152 (1932). *Althaea burchellii* DC. Prodr. 1: 438 (1824). Type: Cape Province, *Burchell* 2557 (G-DC, as microfiche!).

Urena mollis R. Br. in Salt, Voy. App. 65 (1814), nom. nud. Based on: Abyssinia, in inferiori regione montis Scholoda, *Schimper* 364 (GH!); Chelicut, *Salt* s.n. (MO!).

Lebretonia procumbens Wight & Arn. Prodr. Fl. Pen. Ind. Orient. 1: 47 (1834). *Pavonia procumbens* (Wight & Arn.) Walp. Repert. Bot. Syst. 1: 301 ([Sep] 1842), non Casaretto ([Oct] 1842). Type: *Wallich* 2668 (lecto: K).

Lebretonia cernua Span. Linnaea 15: 168 (1841). *Pavonia cernua* (Span.) Walp. Repert. Bot. Syst. 2: 790 (1843). Type: Timor, *Spanoghe* s.n. (BO, K, L).

Pavonia kraussiana Hochst., Flora 27: 293 (1844). Type: inter arundines prope Il. Umlaes, Natal, *Krauss* 338 (specimen unknown).

Hibiscus kraussianus Buching ex Hochst. Flora 27: 293 (1844). *Pavonia kraussiana* (Buching ex Hochst.) Walp. Repert. Bot. Syst. 5: 90 (1845), non Hochst. (1844). Type: in sylvis primitivis prope fl. Kuysna, George, *Krauss* 1569 (specimen unknown).

Lebretonia glechomaefolia A. Rich. Tent. Fl. Abyss. 1: 54 (1847). *Pavonia glechomifolia* (A. Rich.) Garcke ex Schweinf. Beitr. Fl. Aethiop. 1: 54 (1867). Type: Abyssinia, in regione maritima Choho dicta, *Petit* s.n. (P).

Lebretonia acuminata A. Rich. Tent. Fl. Abyss. 1: 53, t. 13 (1847). Type: Abyssinia, prope Axum, *Schimper* 1498 (lecto: K! MO!).

Pavonia crenata Hochst. ex A. Rich. Tent. Fl. Abyss. 1: 53 (1847), pro syn. (nom. nud.). Based on: *Schimper* 1498, 1910 (MO!).

Pavonia macrophylla E. Meyer ex Harv. & Sond. Fl. Cap. 1: 169 (1894). *Pentameris macrophylla* E. Meyer in Drège. Zwei Pflanzengeogr. Dokum. 147, 160, 210 (1843), nom. nud. Type: Natal, Drège s.n. (specimen unknown).

Pavonia leptoclada Ulbr. Bot. Jahrb. Syst. 51: 60 (1913). Lectotype: Southwest Africa, Hereroland, Otjikango bei Okahandja, Dinter 527 (specimen unknown).

Pavonia ctenophora Ulbr. Bot. Jahrb. Syst. 57: 122 (1921). Syntypes: Sudan, Dar-Fur, Gebel Barkin Distr., Surutj, Pfund 245 (specimen unknown); Gebel Chusus von Dar-Fur, Pfund 247 (specimen unknown).

Pavonia meeboldii Ulbr. Bot. Jahrb. Syst. 57: 122 (1921). Type: Vorderindien, Madura, bei Bodinaikonur, Meebold 13558 (specimen unknown).

Pavonia coxii Tadulingham & Jacob, J. Ind. Bot. Soc. 5: 11 (1926). Type: India, Coimbatore, Cox 59B (K).

Borssum Waalkes (1966, p. 136) notes that although the name *Pavonia patens* (Andrews) Chiovenda has been applied to this species in several recent works (see Table 1), the basionym, *Sida patens* Andrews (1809) concerns a plant that is clearly not a *Pavonia* on the basis of the published plate and description; no type specimen for this name has been traced.

***Pavonia praemorsa* Willd.**

This African species was recently found growing as a cultivated ornamental in a garden in Perth, Western Australia. Only a unicate collection was possible; the specimen is currently retained in the author's herbarium. The citation is as follows:

WESTERN AUSTRALIA: Como, South Perth, in garden of Windsor Lodge Motel; cultivated shrub 1-1.5 m; flowers yellow, drying reddish, 25 April 1983, Fryxell 3846 (pf).

There is no evidence that *P. praemorsa* occurs indigenously in the Australian flora.

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References

- Borssum Waalkes, J. van (1966). Malesian Malvaceae revised. Blumea 14: 1-213.
- Fryxell, P. A. (1979). Una revisión del género *Pavonia* en México. Bol. Soc. Bot. México 38: 7-34.
- Kearney, T. H. (1954). The North American species of *Pavonia*. Leaflet W. Bot. 7: 122-130.
- Kearney, T. H. (1958). The South American species of *Pavonia*. Leaflet W. Bot. 8: 225-247.
- Krapovickas, A. (1977). Sinopsis de la sección *Lebretonia* del género *Pavonia* (Malvaceae). Trab. XXVI Congr. Nac. Bot. [Brasil] 1975: 307-322.
- Krapovickas, A. and Cristobal, C. L. (1962). Notas sobre la sección *Lebretonia*, *Pavonia* (Malvaceae) y revisión de las especies argentinas. Lilloa 31: 5-74.
- Ulbrich, E. (1921). Monographie der afrikanischen *Pavonia*-Arten nebst Übersicht über die ganze Gattung. Bot. Jahrb. Syst. 57: 55-183.